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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/410,916	10/01/1999	JEROME H. LUDWIG	PIPE/04	7644

7590 12/04/2001
DAVID J JOSEPHIC
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CINCINNATI, OH 45202

EXAMINER

CHORBAJI, MONZER R

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 12/04/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/410,916	Applicant(s) LUDWIG, JEROME H.	
	Examiner MONZER R CHORBAJI	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the amendment received on 09/21/2001

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loucks (U.S.P.N. 3,084,076) in view of Singh (U.S.P.N. 5,512,249).

With respect to claims 23, 29, and 31: Loucks, which is in the art of sterilizing a fire sprinkler system (col.1, lines 9-12) using steam (col.2, lines 31-32) teaches of delivering steam into a fire sprinkler system for a duration (columns 5-8, examples 1-2) at a temperature (col.2, lines 51-56 and col.3, lines 69-70) and in an amount (columns 5-8, examples 1-2) sufficient to kill microorganisms and to achieve sterilization. With respect to isolating a section of a water distribution pipe, removing the water from the section, inactivating the sprinkler heads by removing them and replacing them with temporary fittings, returning sterilized section in the system to operation, and replacing temporary fittings with sterilized sprinkler heads, such limitations are inherent steps essential to achieving sterilization of a fire sprinkler system as taught by Loucks.

With respect to claim 24; Loucks teaches the step of purging the steam with sterile gas (col.5, lines 39-43. The gas is sterile since Loucks'goal is to sterilize the interior surfaces of a fire sprinkler system).

With respect to claim 25; Loucks teaches the step of charging sterilized water (col.6, lines 54-60 and col.9, lines 23-25. The water is sterile since Loucks'goal is to sterilize the interior surfaces of a fire sprinkler system).

With respect to claim 26; Loucks teaches of maintaining the sterility of the section (col.7, lines 17-18) by guaranteeing that sterilization has been accomplished.

With respect to claims 27-28; Loucks teaches the use of a second sterile gas which is introduced under pressure (col.5, lines 39-43. The first sterile gas is an inert

gas and the second sterile gas is air. The gases are sterile since Loucks' goal is to sterilize the interior surfaces of a fire sprinkler system).

With respect to claim 30; Loucks teaches that the temperature of the steam is between about 100 degree Celsius to about 140 degree Celsius (col.3, lines 69-70).

With respect to claim 23; Loucks fails to disclose the use of a temperature sensor to detect the temperature at a position in a section of the system.

With respect to claim 23; Singh which is in the art of sterilizing a fire sprinkler system (col.1, lines 50-51) using steam (col.1, line 52) teaches of using a temperature sensor (figure 1, 23) to detect the temperature at a position in a section of the system (col.3, lines 6-7). Since both Loucks and Singh are sterilizing a fire sprinkler system by using steam then one skilled in the art would have been motivated to utilize the teachings of Singh into Loucks in order to insure that the required temperature is maintained while sterilizing the interior surfaces of the system (Singh, col.4, lines 50-55).

Response to Arguments

5. Applicant's arguments with respect to claims 23-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record but not relied upon is considered pertinent to applicant's disclosure. Pope et al (U.S.P.N. 6,221,263) which is in the art of sterilizing a fire sprinkler system (col.1, lines 34-37) teaches the use of steam (col.2, lines 10-19).

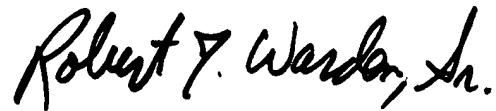
Pope et al teaches that various disinfecting liquids can be used. This statement includes steam as well as any type of disinfecting or sterilizing or decontaminating agent), Ludwig et al (U.S.P.N. 6,076,536) which is in the art of sterilizing a fire sprinkler system (col.2, lines 24-29 and col.2, lines 12-13. One of the meanings of the word "passivate" is to make inactive and this means sterilizing or decontaminating or disinfecting). Furthermore, Ludwig et al teaches of isolating a section of a water distribution pipe, removing the water from the section, inactivating the sprinkler heads by removing them and replacing them with temporary fittings, returning sterilized section in the system to operation, and replacing temporary fittings with sterilized sprinkler heads.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (703) 305-3605. The examiner can normally be reached on M-F 8:30-5:00.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (703) 308-2920. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703) 305-7719 for After Final communications.

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9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



ROBERT J. WARDEN, SR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

Monzer R. Chorbaji *MRC*
Patent Examiner
AU 1744
November 30, 2001